

**BY ORDER OF THE COMMANDER
AIR MOBILITY COMMAND**

AFI 21-101AMC1 CL-1

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Maintenance

**C-130 DEBRIEFING
CHECKLIST**



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This checklist complements AFI 21-101AMC Supplement 1, *Aerospace Equipment Maintenance Management*, is formatted so that it may be trimmed to fit aircrew style binders.

C-130 DEBRIEFING CHECKLIST

INTRODUCTION

This debriefing checklist will be used in conjunction with T.O. 1C-130H-2-00FR-00-1- to assist the maintenance debriefer in ensuring all pertinent information on each system malfunction is included on the AFTO Form 781A, **Maintenance**

Discrepancy and Work Document. The checklist is not intended to replace systems knowledge or common sense. The debriefer is charged with the responsibility of questioning the aircrew to make sure that all symptoms of a malfunction are known and recorded on the AFTO Form 781A. Remember this is the only information the technician will have to determine the source of the problem.

Forward recommended changes to this form through channels to HQ AMC/LGM.

- I. **Instructions:** Prior to debriefing:
 - A. The debriefing team members will review past debriefing forms, logs, or files to acquaint themselves with any previous repeat/recurring discrepancies.
 - B. The appropriate maintenance specialty should be represented at the debriefing to help clarify discrepancies.

- II. **Debriefing Procedures.**
 - A. The debriefing team leader will take charge of the debriefing and debrief the aircrew, utilizing this checklist as a guide.
 - B. Review all AFTO Form 781A for the mission(s). Make special note of repeated or recurring discrepancies.
 - C. Debrief all discrepancies as clearly as possible.
 - D. Check adequacy of corrective action on all cleared discrepancies. If necessary consult with the on-duty pro super and specialist to validate questionable corrective actions. This should be the responsibility of the SMO, Maintenance Superintendent, Pro-Super, Expeditor, and lead technicians, not the debriefer.
 - E. Using the questions in this checklist, and T.O. 1C-130H-2-00FR-00-1, ensure all open descriptions of the discrepancies are as complete and comprehensive as possible.
 - F. Determine if aircraft was flown low level over salt water and act as necessary to comply with T.O. 1-1-691, *Aircraft Weapon System Cleaning and Corrosion Control*.
 - G. Ensure ALL locations where the aircraft stopped

and was chemically disinfected for Foot and Mouth Disease, that an entry is made in the 781A's. Debriefers will document this information in G081, using screen 9051, with work unit code 02400 to create the Foot and Mouth Decontamination discrepancy; G081 will automatically enter this information in the aircraft history. Report this information electronically to HQ AMC/LGMJS@scott.af.mil. Due to the potentially damaging long-term effects of the decontamination on sensitive aircraft parts, accurate tracking is essential.

TABLE OF CONTENTS

SECTION I

AIRCRAFT GENERAL DEBRIEFING

CHECKLIST

1. Airframe and Doors (System 11)	12
a. Cargo Ramp and Door Inop (Airborne)	12
b. Cargo Ramp and Door Inop (On Ground)	12
 2. Landing Gear (System 13)	 13
a. Landing Gear Will Not Retract	13
b. Landing Gear Will Not Extend	13
c. Nose Gear Steering is Erratic	14
d. Nose Wheel Shimmy	14
e. Insufficient Braking	14
 3. Flight Controls (System 14)	 15
a. Ailerons Fail to Respond Normally	15
b. Wing, Nose, or Tail Heavy Condition	15
c. Primary Flight Control Malfunctions	16

4. Turboprop Power Plant (System 22)	16
a. Starter System	16
b. Engine Slow to Start	16
c. Torque, TIT, Fuel Flow, or RPM Flux	17
d. Low Torque	17
e. Low Oil Pressure	18
f. Temperature Datum System	18
g. Engine Oil System	19
 5. Auxiliary Power Plant (System 24)	 20
a. Engine Will Not Start	20
b. Low Bleed Air Pressure	20
 6. Air Conditioning Pressurization and Anti-Ice (System 41)	 20
a. FLT Deck Air Conditioner Inop	20
b. Cargo Comp Air Conditioner Inop	20
c. Pressurization (General)	21
d. Wing Anti-Icing Over Heat	21
e. Engine Inlet Anti-Icing	21
f. Propeller Anti-Icing	21
g. Temp Control Malfunction	21
 7. Hydraulic Propeller (System 32)	 22

SECTION II

ACCESSORY SYSTEMS CHECKLIST

1. Landing Gear (System 13)	23
a. Landing Gear Position/System (General)	23
b. Anti Skid	23
2. Turbo Prop Power Plant (System 22)	24
a. Tachometer System	24
b. Torque Meter System	24
c. Turbine Inlet Temp System	24
d. Oil Press Indicator System	25
e. Oil Temp Indicator	25
f. Oil Quantity Indicating System	25
3. Electrical Power Supply (System 42)	26
a. Battery	26
b. Transformer Rectifier	26
c. External Power	26
d. Co-Pilots AC Inverter	26
e. AC Instrument / Fuel Control Inverter	27

4. Hydraulic & Pneumatic Power Supply (System 45)	27
5. Fuel System (System 46)	28
a. Fuel Quantity Indicators	28
b. Fuel Flow	28
6. Miscellaneous Utilities (System 49)	28
a. Turbine Overheat	28
b. APU/GTC Fire Warning	29
c. Engine Fire Warning	29
d. Nacelle Overheat	29
7. Instruments General (System 51)	30
a. Pilot Static and/or Altimeter Malfunction	30
b. Stand-by Compass	30
c. ADI (Flight Director System)	31
d. Heading Situation Indicator (HIS)	31
e. AXIS Gyro System (Attitude Reference System)	31
8. Autopilot Systems (System 52)	31
*also, see section 17 (page 43)	
a. AN/AYW-1 Autopilot and GCAS	31
b. E-4 Autopilot	32
c. N1/C-12 Compass	34
9. HF Communications (System 61)	35

a. 618T2	35
b. ARC-190	35
10. VHF Communications (System 62)	35
11. UHF Communications (System 63)	36
12. Interphone (System 64)	36
a. AN/AIC-18/25	36
b. AN/AIC-13	36
13. IFF (APX-64/APX-72)(System 65)	37

14. Emergency Comm (Emergency Locator Transmitter) (System 66)	37
15. Radio Navigation (System 71)	37
a. TACAN	37
b. VHF NAV	38
c. 51Z3/51Z4 (Marker Beacon)	38
d. ADF	39
e. UHF/VHF/DF	39
f. Glide slope	39
g. VOR/ILS	40
h. SCNS	40
16. Radar Navigation (System 72)	40
a. Radar Altimeters	40
b. AN/APN-59	40
c. AN/APN-59 Scopes	41
d. AN/APN-59 Antennas	42
e. AN/APN-169	42
f. AN/APQ-122 (V) 1	43
g. AN/APQ-122 (V) 5	44
h. AN/ARN-131	44
i. CMA-880	45
j. AN/APN-218	45
k. LN-15J	46
l. AN/ASN-90	46
m. AN/APN-153	47

17. Airlift Defensive Systems (ADS) (System 76)	48
a. AAR-47 Missile Warning System (MWS)	48
b. ALE-40/47 Cntr-Measure Disp Sys (CMDS)	48
c. ALR-69 Radar Warning Receiver (RWR)	49
18. Foot and Mouth Decontamination	49

SECTION I
AIRCRAFT GENERAL DEBRIEFING
CHECKLIST

1. Airframe and Doors (System 11)

a. Cargo Ramp and Door Inop (Airborne)

- (1) What is the position of the ramp and door switch located on the ADS Control Panel?
- (2) Did the circuit breaker pop?
- (3) Is the ramp door light on? (ADS Panel)
- (4) Was the auxiliary hydraulic pump on?

b. Cargo Ramp and Door Inop (On Ground)

(1) Ramp:

- (a) What is the position of the ramp control switch?
- (b) Is the hydraulic pump on?
- (c) Did the circuit breaker popped?
- (d) Were both anchor arms fully raised?

(2) Door

- (a) What position is the position of the door control switch?
- (b) Is the hydraulic pump on?
- (c) Did the circuit breaker pop?
- (d) Were both anchor arms fully raised?

2. Landing Gear (System 13)

a. Landing Gear Will Not Retract

- (1) What gear was affected?
- (2) Position indicator readings?
- (3) Did any circuit breaker pop?
- (4) Were gears visually checked?
- (5) What were their positions?
- (6) Any unusual vibration or noises?
- (7) Indicated airspeed at time of retraction?
- (8) Was hydraulic system performing normally?

b. Landing Gear Will Not Extend

- (1) What gear was affected?
- (2) Control handle position?
- (3) Position indicator readings?
- (4) Did any circuit breakers pop?
- (5) Were gears visually checked?
- (6) What were their positions?
- (7) Did indicator light in handle come on?
- (8) Any unusual vibration or noises?
- (9) Was manual extension successfully employed?

- (10) Indicated airspeed at time of extension?
- (11) As hydraulic system performing normally?

c. Nose Gear Steering System is Erratic

- (1) Is the utility reservoir fluid level full?
- (2) At what speed does the steering get erratic?
- (3) What does the utility accumulator read with full system pressure?

d. Nose Wheel Shimmy

- (1) Did shimmy occur during taxi, landing/takeoff roll, or gear extension/retraction?
- (2) Did shimmy stop with nose wheels off the ground?
- (3) Did the steering pointer move back and forth rapidly during shimmy with wheels on the ground?
- (4) What speed did shimmy start?
- (5) What speed did the shimmy stop, if it stopped?
- (6) Any other pertinent data?

e. Insufficient Braking

- (1) What position was the brake switch in? Normal or Emergency?
- (2) Was anti-skid on, or off?
- (3) Is there insufficient braking in both emergency and normal system?
- (4) Was braking more effective on one side than the other?
- (5) Were the circuit breakers pulled?

- (6) What is the initial air charge of the normal brake accumulator? Is it 1500 PSI?
- (7) What is the initial air charge of the emergency brake accumulator? Is it 1000 PSI?
- (8) Is there any hydraulic fluid leakage?
- (9) Did brake pedals feel spongy?

3. Flight Controls (System 14)

a. Ailerons Fail to Respond Normally to Control Wheels

- (1) Are boost and utility circuit breakers closed?
- (2) Are aileron boost and aileron utility switches on?
- (3) Are the engine pump press warning lights on?
- (4) Does the quadrant rotate in response to the control movement wheels?
- (5) Does the booster output lever actuate the aileron pushrods that extend outward into both wings?
- (6) Is the initial air charge of both utility and booster accumulators 1500 PSI?
- (7) Is there any hydraulic leakage?
- (8) Was autopilot engaged?

b. Wing, Nose, or Tail Heavy Condition

- (1) What was load and CG? Were they recalculated?
- (2) What was fuel load and distribution?
- (3) Were there any fuel quantity-indicating problems?
- (4) Was the autopilot off, on, or discrepant?
- (5) Verify direction and amount of trim applied to counteract.
- (6) Was heavy condition apparent during all flight conditions? If not, describe.

c. Primary Flight Control Malfunctions

- (1) What was indicated airspeed?
- (2) What were indicated hydraulic pressures? Utility?
Booster?
- (3) What other hydraulic units were being operated?
- (4) What actions were taken by crew to correct
malfunction? To what effect?
- (5) Was autopilot engaged?

4. Turboprop Power Plant (System 22)

a. Starter System

- (1) Was starter control valve light illuminated (H model)?
- (2) Was light illuminated in start button (E model)?
- (3) Did engine starter ignition control circuit breaker pop?
- (4) Were fire emergency handles in normal position?
- (5) Was there any engine rotation?
- (6) Was there drop in air pressure with button in / switch
held?

b. Engine Slow Start

- (1) Was external power source being used?
- (2) What was actual time to start?
- (3) Was bleed air being used for any other system?
- (4) What was bleed air pressure?
- (5) Was bleed air check performed?
- (6) Were throttles in ground idle?
- (7) Was there an indication of parallel and series operation?
- (8) Was fuel enrichment used?
- (9) If enrichment was used, did enrichment occur?

(10) Was TIT high or low? If so, how much?

c. Torque, TIT, Fuel Flow, or RPM Fluctuations

- (1) What instrument was fluctuating and how much?
- (2) Did frequency meter correspond with fluctuation?
- (3) Were indicators swapped?
- (4) What was the throttle position?
- (5) Was fluctuation in auto or null?
- (6) Was fluctuation in normal and/or mechanical?

d. Low Torque

- (1) What was throttle position?
- (2) What was fuel flow, RPM, and TIT?
- (3) Were indicators swapped?
- (4) Were throttles aligned above crossover?
- (5) What was anti-ice torque drop with engine bleed valve closed?
- (6) What was fuel flow, RPM, TIT and torque in null?
- (7) What was the outside air temperature, pressure altitude on ground run up?

e. Low Oil Pressure

- (1) Power section or gear box?
- (2) If gearbox, at what time of engine operation and at what altitude did problem start?
- (3) What was RPM?
- (4) What was oil temperature?
- (5) What did oil pressure gauge indicate statically?

f. Temperature Datum System

- (1) Was system inop or erratic?
- (2) What was OAT, pressure altitude, and power setting?
- (3) What was TIT, fuel flow, RPM, and torque at take off in auto?
- (4) What was TIT, fuel flow, RPM, and torque at take off in null?
- (5) Did TIT correct during controlling check?
- (6) Did fuel correction light stay out above crossover?
- (7) What was crossover TIT with light out?
- (8) What was crossover TIT with light on?
- (9) Would T.D. system lock?
- (10) Did fuel correction light stay out below crossover in locked?
- (11) Were throttles aligned at 850 degrees TIT in auto? If not, what were fuel flow, RPM, and torque?
- (12) Were TIT indicators swapped?

g. Engine Oil System

- (1) Loss oil quantity.
 - (a) What was the oil quantity before engine start?
 - (b) Rate of Loss?
 - (c) Source of Loss?
 - (d) What altitude does it occur?
 - (e) What altitude does it cease?
 - (f) Was engine shutdown?
 - (g) Did engine windmill after shutdown? If so, how long?
 - (h) Did aircraft attitude affect loss?
 - (i) OAT when loss started?
 - (j) Oil pressure at start of loss?
- (2) High Oil Temperature
 - (a) Where did it occur ground/flight?
 - (b) What was temperature at duration?
 - (c) What was throttle setting?
 - (d) Did temperature reduce when throttle advanced?
 - (e) Indicator swapped?
 - (f) If in ground idle, what was torque?
 - (g) What was position of oil cooler flap?
 - (h) Was oil cooler augmentation in use?
 - (i) What was OAT?

5. Auxiliary Power Plant (System 24)

a. Engine Will Not Start

- (1) Was oil in tank?
- (2) Was Number 2 cross-feed valve open?
- (3) Did APU/GTC door open?

b. Low Bleed Air Pressure

- (1) Was external power source being used?
- (2) Did ATM ever start?
- (3) Did it come on speed?
- (4) Did it trip off the line when a load was applied to the generator?
- (5) Did it trip off line when generator was turned on?
- (6) Was frequency meter steady?

6. Air Conditioning, Pressurization, and Anti-Ice (System 41)

a. Flight Deck Air Conditioner Inoperative

- (1) Was the system tried in both auto and manual?
- (2) Did the circuit breaker pop?
- (3) Did the system cycle or was it completely inop?
- (4) Was the manual override handle checked?

b. Cargo Compartment Air Conditioner Inoperative

- (1) Was the system in auto or manual?
- (2) Did the circuit breaker pop?
- (3) Did the system cycle or was it completely inop?
- (4) Was the manual override handle checked? Was it tried in both hot and cold?

c. Pressurization (General)

- (1) Were both air cond units running?
- (2) Was switch in auto or manual?
- (3) Was the pressure erratic?
- (4) Did the crew hear any leaks in the fuselage?
- (5) Were all doors shut properly?
- (6) Was the safety valve shut all the way?

d. Wing Anti-Ice Overheat

- (1) Which indicator showed overheat?
- (2) Was the system turned off?
- (3) Would the system operate normally in auto?
- (4) Would the system operate normally in manual?
- (5) Did the circuit breaker pop?

e. Engine Anti-Icing Inlet

- (1) Did circuit breaker pop?
- (2) Was proper switch on?
- (3) Was there a torque drop? If so, how much?

f. Propeller Anti-ice

- (1) Did circuit breaker pop?
- (2) Was amperage within limits?

g. Temp Control Malfunction

- (1) Was system in auto or manual?
- (2) Was system in full hot or full cold condition?
- (3) Was it a cargo or flight deck system?
- (4) Was under-floor heat **ON** or **OFF**?

7. Hydraulic Propeller (System 32)

- (1) How fast is the movement of the tach?
- (2) Are the other engine instruments moving also? Which moves first?
- (3) What was the percent of fluctuation?
- (4) Is the frequency meter moving? How many cycles?
- (5) Position of governor during fluctuation?
 - (a) **Mech:** Were synchrophaser circuit breakers pulled?
 - (b) Normal?
 - (c) What master was in use?
- (6) Were Props Indexed?
 - (a) Did pitchlock occur?
 - (b) If yes, did fluctuation continue in pitchlock?
- (7) Position of T.D. Switches
 - (a) **Auto:** Did fluctuation continue?
 - (b) **Locked:** Did fluctuation continue?
 - (c) **Null:** Did fluctuation continue?
- (8) Fluctuation started after how many hours of flight or on ground run-up?
- (9) Did a low oil light come on in flight or during shutdown?
- (10) What were the weather conditions at the time of fluctuation?
- (11) At what altitude did it start?
- (12) Did you climb to a higher altitude (if below 1500 MSL)?

SECTION II
ACCESSORIES SYSTEMS CHECKLIST

1. Landing Gear (System 13)

a. Landing Gear Position and System (General).

- (1) Were circuit breakers set?
- (2) What position was gear in, in relation to actual position of the indicator? Actual position of gear; down locked _____, up locked _____, or moving either direction _____, indicator showed: down locked _____, up and locked _____, up indication cross hatched _____.

b. Anti-skid

- (1) Did anti-skid master inop light come on?
- (2) What position was brake select switch? Norm
Emergency?
- (3) What position was anti-skid switch? On _____
Off _____
- (4) Did circuit breaker pop?
- (5) What was normal brake pressure?
- (6) Was touchdown relay circuit breaker in?
- (7) Did ground test check out okay?
- (8) Did in flight test check out okay?

2. Turboprop Power Plant (System 22)

a. Tachometer System

- (1) Was indicator swapped in flight?
- (2) If so, to which position was the malfunction isolated?
- (3) Was there a fluctuation?
- (4) Did it read high or low? How much or what was the percent?
- (5) Were other engine instruments fluctuating or reading high or low? If so, give specific readings.

b. Torque Indication System

- (1) Was indicator swapped in flight?
- (2) Did indicator fluctuate?
- (3) Did it read high or low?
- (4) Were other engine instruments fluctuating or reading high or low? If so, give specific readings.

c. Turbine Inlet Temp System

- (1) Was the indicator swapped?
- (2) If so, which indicator showed the problem?
- (3) Was there fluctuation?
- (4) Did indicator read HIGH _____ or LOW _____?
- (5) Were other engine instruments fluctuating or reading high or low? If so, give specific readings.

d. Oil Press, Indicator System

- (1) Was indicator swapped?
- (2) Where was the problem after indicators were swapped?
- (3) Was there a fluctuation?
- (4) Did indicator read HIGH _____ or LOW _____?
- (5) Were other engine instruments fluctuating or reading high or low? If so, give specific readings.

e. Oil Temp Indicator

- (1) Was indicator swapped?
- (2) Was there a fluctuation?
- (3) Did indicator read HIGH _____ or LOW _____?
- (4) Were other engine instruments fluctuating or reading high or low? If so, give specific readings.

f. Oil Quantity Indicating System

- (1) What was oil quantity before engine start?
- (2) Were indicators swapped?
- (3) Where was the problem after switching the indicators?
- (4) Is there a leak in the system?
- (5) How much oil was the engine serviced to at last known amount?

3. Electrical Power Supply (System 42)

a. Battery

- (1) Was battery switch in ON position?
- (2) What was indicated battery voltage?
- (3) What voltage is indicated after load source applied?
- (4) Were any bus out lights on?
- (5) Was bus tie switch closed?
- (6) Was battery control circuit breaker opened?

b. Transformer Rectifier

- (1) Were TR unit (3) circuit breakers popped?
- (2) What was the indicated load?
- (3) What was indicated voltage?
- (4) Did TR unit indicate damage by smoke?

c. External Power

- (1) Was circuit breaker in battery compartment closed?
- (2) Did you change power carts?
- (3) Did external power external ready light come on?
- (4) Were external power switches positioned properly?

d. Co-Pilots AC Inverter

- (1) Was control switch on?
- (2) Was inverter running?
- (3) What was voltage? _____ Frequency?
_____.
- (4) Was selected power out light on?
- (5) Did any circuit breakers pop?
- (6) Any unusual noise or vibration?

e. AC Instrument and Fuel Control Inverter

- (1) Was control switch on?
- (2) Was inverter running?
- (3) What was voltage? _____ Frequency?
_____.
- (4) Are both A and B phases affected?
- (5) Was selected power out light on?
- (6) Did any circuit breakers pop?
- (7) Any unusual noise or vibration?

f. ESU abnormalities?

g. BSS abnormalities?

4. Hydraulic and Pneumatic Power Supply (System 45)

- (1) Did indicator read high or low? If so, how much?
- (2) Was indicator swapped?
- (3) If so, on which system was the problem indicated?
- (4) Was indicator reading exactly zero with all power bled from the system?
- (5) Was the indicator completely inop?
- (6) Were pumps isolated to show individual pressure?
- (7) Did indicated pressure reflect on system accumulator?
- (8) Did indicated pressure reflect on subsystem gages?
Normal brake? Emergency brake? Rudder boost?
Aux direct reading gage (ramp control panel)? (When applicable)

5. Fuel System (System 46)

a. Fuel Quantity Indicators

- (1) Did indicator go below zero in-flight?
- (2) Did indicator go off scale high in-flight?
- (3) Did indicator pointer “hunt?” If yes, did problem occur in flight or on ground?
- (4) Did indicator stay at one indication thru out flight?
- (5) Digital error codes?

b. Fuel Flow

- (1) Were two or more indicators malfunctioning?
- (2) If only one malfunctioned, was it swapped with another fuel flow indicator?
- (3) If so, which indicator still had the problem?
- (4) Were other engine instruments fluctuating or reading high or low?

6. Miscellaneous Utilities (System 49)

a. Turbine Overheat

- (1) Which fire emergency handle flashed?
- (2) Did the master light flash also?
- (3) Did all four fire emergency handles flash?
- (4) Did any circuit breaker pop?
- (5) Did circuit ground test?
- (6) What was TIT?
- (7) Was the top or bottom set of lights on in the T-handle?

b. APU/GTC Fire Warning

- (1) Did APU/GTC fire warning lights on handle light?
- (2) Did master light come on?
- (3) Did circuit breaker pop?

c. Engine Fire Warning

- (1) Did circuit ground test?
- (2) Which fire emergency handle light was steady?
- (3) Did master warning light come on?
- (4) Did circuit breaker pop?
- (5) What was TIT?
- (6) Was the top or bottom set of lights on in T-handle?

d. Nacelle Overheat

- (1) Which nacelle overheat warning light came on?
- (2) Did circuit breaker pop?
- (3) Did ground test?
- (4) Did warning light go out when throttle was retarded?
- (5) What power setting did light come on?
- (6) Was bleed check accomplished? If so, what was bleed-down time?

7. Instruments General (System 51)

a. Pitot Static System and/or Altimeter Malfunction

- (1) How did bad altimeter compare with other altimeters?
Ft high _____. Ft low _____.
- (2) Was there any noticeable change in the rate of climb indicator? Yes? No? If so, what did it show?
- (3) Was the altimeter set to the correct field elevation and barometric setting?
- (4) If high or low, at what altitude? _____. How many feet high _____ or low _____.
- (5) Was indicated airspeed within tolerance? If not, how many knots high _____ or low _____?
- (6) Was pitot tube heat on?
- (7) Was indicator fluctuating?
- (8) Were you in clear air ____ rain ____ clouds _____?
- (9) If malfunction was on Co-Pilots and Nav's Airspeed and Altimeters, was there a malfunction in Auto Pressurization or (Radar) low range, Press Altimeter?

b. Stand-By Compass

- (1) Is correction card in place and up to date?
- (2) Is there a visible leak of fluid from the compass?
- (3) Was there any type of magnet near the compass?
- (4) Was flight deck lighting being utilized?

c. ADI (Flight Director System)

- (1) Any flags in view?
- (2) Which navigation mode selected?
- (3) Was indication same on both pilots and co-pilots indicator?
- (4) Did problem appear in more than one navigation mode?
- (5) See NAV section for selected mode.

d. HSI

- (1) See autopilot section for compass card problems.
- (2) See NAV section for related mode pointer problems.

e. Axis Gyro System (Attitude Reference System)

- (1) Was problem at NAV station and/or one or both position indicators?
- (2) Does problem appear only in or after turns?

8. Autopilot Systems (System 52)

a. AN/AYW-1 Auto pilot and GCAS

- (1) What were altitude, airspeed, and configuration?
- (2) What were the autopilot and flight director modes?
- (3) Were there autopilot or GCAS call outs?
- (4) Were there any FPWU messages?
- (5) Did GCAS INOP light illuminate?
- (6) Did TRIM or VREF FAILS light illuminate?
- (7) Were there any radar altimeter malfunctions occur?
- (8) Was the GS pointer oscillating during the AP coupled

or manual approaches?

- (9) Did you lose any NAVAID's?
- (10) Did the A/P #1 or A/P #2 lights ever flash?
- (11) Was there any primary flight control problem?
- (12) How did the INS 1 and VREF attitudes look in comparison?
- (13) How did the INS 1 magnetic heading outputs look in comparison?

b. E-4 Autopilot

- (1) Is the system completely inoperative?
- (2) Could the pilot switch be engaged before _____ or after _____ the timing cycle was completed?

- (3) Would all the servo engage switches engage freely?
If elevator would not engage, was trim tab switch in normal position? If rudder would not engage, was #1 compass system operative?
- (4) Would altitude hold switch engage freely?
- (5) Which axis was inoperative, rudder _____
aileron _____ or elevator
_____?
- (6) If the elevator axis is inoperative, was it in turns or straight and level flight? Was the altitude hold inoperative?
- (7) Before engagement of autopilot, was the aircraft properly trimmed? ELEV _____ RUD
_____ AIL _____.
- (8) Were all engine power settings equal?
- (9) Was fuel load evenly distributed?
- (10) Did you recycle system? If so, did problem clear itself?
- (11) At what time after take off did malfunction occur?
- (12) At what air speed, altitude and OAT did malfunction occur?
- (13) Was A/P ins K-6A tie on OK?
- (14) Was pitch monitor self test good? (MC-130E only)
- (15) If INS responds poorly, are other radio guidance modes also bad?
- (16) Does compass switching system work properly in No. 2 C-12 position?

- (17) Was a cardinal heading comparison noted?
- (18) Was compass problem most notable after or during a turn? Was turn prolonged?
- (19) Were all heading indicators in agreement?
- (20) Was the response rate similar between all the repeater cards?

c. N-1/C-12 Compass

- (1) If compass system was malfunctioning, which mode, magnetic slaved or DG?
- (2) If heading was in error, which system was in error and which was correct?
- (3) Was annunciator working properly in MAG mode?
- (4) Was annunciator centered if in DG mode?
- (5) If C-12 system powered, was adequacy flag on digital controller showing? (C-12 only)
- (6) How many degrees did the #1 system vary from #2?
- (7) Which system seemed to lag during turns?
- (8) Was a sextant reading taken to determine correct heading?

9. HF Communications (System 61)

a. 618T2

- (1) Did screens display any faults?
- (2) Does antenna tuner tune in the allowed amount of time?
- (3) Does TX or reception break up in flight?
- (4) Was squelch adjusted to receive transmissions?
- (5) On which frequencies was the problem noted?
- (6) Was side-tone normal during transmission?
- (7) Were other aeronautical stations contacted?

b. ARC-190

- (1) Were there any SCNS fault messages?
- (2) Could you receive?
- (3) Could you tune?
- (4) Could you TX?
- (5) Were KY-RCU'

10. VHF Communications (System 62)

- (1) Is the receiver squelch adjustable at control box? (N/A on SCNS aircraft)
- (2) Did screens display any faults?
- (2) Does the problem also occur on the ground?
- (3) On what frequencies was the problem noted?
- (4) Was side tone normal during transmission?
- (5) Does TX or reception break up in flight?
- (6) Was the transmission/reception range limited?

- (7) (Did other stations/aircraft report the same problem?)

11. UHF Communications (System 63)

- (1) Did screens display any faults?
- (2) Is the reception noisy in main or in both positions on the control box?
- (3) Does TX or reception break during flight?
- (4) Were both upper and lower antennas used? (If applicable)
- (5) Was the transmission/reception range limited?
- (6) Did other stations/aircraft report the same problem?

12. Interphone (System 64)

a. AN/AIC-18/25

- (1) Were headsets swapped with known good ones to eliminate possible bad headsets?
- (2) Was TX or reception intermittent?
- (3) Was problem encountered at more than one position?
- (4) Were the control boxes swapped?
- (5) Was Quick Don being used?

b. AN/AIC-13

- (1) Were cockpit transmissions normal?
- (2) Was a different hand mic used?
- (3) Was the hand mic moved from one position to another?

13. IFF (APX-64/APX-72) (System 65)

- (1) Was system checked on more than one mode?
- (2) Was system reported weak or inop by more than one station?
- (3) Was I/P working properly?
- (4) Does system self test? If so, were both antennas self tested separately? Results?
- (5) Was GCA receiving your reply? Were all antenna positions tried?
- (6) Which modes and codes were tried and with what results?
- (7) What did en-route stations say about your reply?
- (8) Test set bypassed?

14. Emergency Communications (Emergency Locator Transmitter) (System 66)

- (1) Did ELT transmit during flight?
- (2) Was ELT transmission monitored on UHF/VHF radio?
- (3) Did ELT reset function properly?

15. Radio Navigation (System 71)

a. TACAN

- (1) Did you allow system 15 minutes to warm up before tuning?
- (2) Was your AZ proper? If not:
 - (a) Did screens display any faults?
 - (b) Did AZ rotate smoothly?
 - (c) Did you have a 40 degree lock on?

- (d) Did it slow down when it passed what you thought your proper AZ?
- (e) Was AZ reading satisfactory in self test?
- (f) Was it #1 or #2 system?
- (g) Was indication same on both pilot and co-pilot indicators?
- (3) Was your tone clear?
- (4) Did your DME lock properly? If not:
 - (a) Did you have false lock ons?
 - (b) How far from the station, would it lock on?
 - (c) Would the set track in or out properly?
 - (d) Was there any error in DME lock-on (NM)?
 - (e) Was DME reading good in self-test?
 - (f) Was it #1 or #2 system?
 - (g) Was it same malfunction on both pilot's and copilot's indicator?
- (5) Was the set tried on more than one channel?
- (6) If so, were the problems the same?
- (7) How long after take-off did malfunction occur?

b. VHF NAV

- (1) Did screens display any faults?
- (2) Was the AZ information correct?
- (3) Did system function properly on all channels selected?
- (4) Did you have proper deflection on you HSI?
- (5) Did you have a good audio signal?
- (6) Did HSI reading agree with RMI?

c. 51Z3/51Z4 Marker Beacon

- (1) Did screens display any faults?

- (2) Did you have all three-marker indications?
- (3) Did you have both tone and light indications on all markers?

d. ADF

- (1) Did #1 and #2 systems both function properly?
- (2) Did all your function (ADF, ANT loop) work properly?
- (3) Did left right switch drive antenna properly?
- (4) Did voice CW switch properly?
- (5) If malfunction was noted, did it remain the same when control was switched from one position to the other?

e. UHF/VHF/DF (If applicable)

- (1) Does ID-250 continuously rotate in one direction?
- (2) Does indicator lock 180 degrees out of normal?
- (3) Can you hear AM-608 vibrator in headset, 100 cycles?
- (4) When in ADF position, does indicator rotate at all?
- (5) Is portion of antenna sluggish?

f. Glide scope

- (1) Did screens display any faults?
- (2) Was off flag in view?
- (3) Did horizontal pointer come into view?
- (4) Did indicated glide scope appear?
- (5) Was malfunction on #1 or #2 glide scope system?
- (6) Were same indications present on both pilot's and copilot's indicators?

g. VOR/ILS.

- (1) Did screens display any faults?
- (2) Was flag in view or pulled?
- (3) Was CDI indication correct?
- (4) Was azimuth needle indicator correct?
- (5) Was indent good?
- (6) For ILS, did vertical pointer come into view?
- (7) Did flag pull?
- (8) Was it #1 or #2 system?
- (9) Were indications the same on both pilot's and copilot's indicators?

h. SCNS

- (1) Which IDCU had fault?
- (2) Was the fault solid or intermittent?
- (3) How long into flight did fault occur?

16. Radar Navigation (System 72)

a. Radar Altimeters

- (1) Did fault occur on ground only?
- (2) At what altitude did you have indicator preset for?
- (3) Did fail light operate properly?
- (4) Did altimeter give proper altitude readings?
- (5) Is the indication the same on the pilot and navigator's indicators?

b. AN/APN-59 (N/A on AWADS)

- (1) What did line voltage read?
- (2) What did Mag current read?

- (3) Were the crystal currents sweeping or locked on?
- (4) Was rec gain working?
- (5) What was the max range at which targets were displayed?
- (6) Was IAGC working?
- (7) What was the min range at which targets were displayed?
- (8) Was FTC working?
- (9) Was STC working?
- (10) Was beacon function used? If so, how did it function?

c. AN/APN-59 Scopes

- (1) Did all range lights work on proper range?
- (2) With range delay on, were the TD and 3-30/5 lamps illuminated?
- (3) Was sweep trace visible on scope?
- (4) Did focus work properly and was it centered between the CW and CWW extremes?
- (5) Did the indicator in R scan rotate at proper speed?
- (6) Did the intensity control work properly?
- (7) Did the heading marker appear in proper position and degrees?
- (8) Did stab-rel switch work properly?
- (9) Was beacon function used? If so, how did it function?
- (10) Were heading marker and range mark intensity adjustable?
- (11) No heading marker, was it missing both pilot and navigator scope?

- (12) Was relative bearing and sector width performing normally?

d. AN/APN-59 Antenna

- (1) Was stab working properly?
- (2) Was tilt working properly?
- (3) Did the antenna function normally on both pencil and fan?
- (4) Was the rotation of antenna at proper speed and direction for placement of scan switch?

e. AN/APN-169

- (1) What was your slot number?
- (2) Who was your leader? What was his slot number?
- (3) Who was master?
- (4) Did system pass Bite test?
- (5) What light was illuminated on the Maintenance Panel?
- (6) What was your position in the formation?
- (7) What was your leader's position in the formation?
- (8) What color lamp illuminated on the Receiver-Transmitter? (N/A on AWADS)
- (9) What color lamp illuminated on the Coder-Decoder? (N/A on AWADS)
- (10) What number was the clock readout on the Coder-Decoder? (N/A on AWADS)
- (11) Did all controls and lamps on the indicator function properly?
- (12) Were the video targets ready?
- (13) Were range marks present and stable on each range?
- (14) Were the pilot and copilot ADIs used?
- (15) If only one ADI was used, which one?

- (16) Was cross track error right or left? How much?
- (17) What was the range indicator error in relationship to the indicator video target presentation?
- (18) Did FCI indicators function properly?
- (19) Did the instrument panel "SKE" lamp illuminate when the mode SKE/NORMAL switched was placed to SKE?
- (20) Were antenna ghost targets observed? If so,
 - (a) What was your altitude?
 - (b) Did the proximity Warning System activate?
 - (c) What was your position?

f. AN/APQ-122 (V)1

- (1) Did antenna work correctly in Stop, Fast, Slow and Sector modes? If not?
 - (a) Which mode failed?
 - (b) What was indication?
- (2) Was sector mode variable?
- (3) Was the Bore Sight check performed? Did it pass?
- (4) Was X-Band or Ka Band or both systems used?
- (5) At what time during the flight did the system fail?
- (6) Ka Band Freon Pressure correct at time of failure?
- (7) What was your altitude at time of failure?
- (8) What was the Maintenance Panel lamp readout at time of failure?
- (9) Was system operated at an altitude below 12,000 feet after a failure at higher altitude?
- (10) Did system work in short range and not in long range?
- (11) Did the system work in Beacon mode of operation?

- (12) Was the navigator's indicator presentation normal?
- (13) Was the pilot's indicator presentation normal?
- (14) Did the radar perform normal in all modes except computer?
- (15) Were any circuit breakers popped during flight?

g. AN/APQ-122 (V)5

- (1) What fail indication did you have?
- (2) What presentation did you have on the indicators?
- (3) What controls were operated after the fail indication and what were the results?
- (4) Did pilot's SKE/RADAR indicator operate in radar mode? SKE mode?
- (5) SKE operational?: If not, what fail lights were on?
- (6) Was navigator's radar indicator operating normally?
- (7) Was magnetron "burn in" attempted? If so, did system fail again? How long?

h. AN/ARN-131

- (1) With function select in SD/MAL, did any status codes appear in the display? If so, what codes?
- (2) With function select in SIG/TST, did any status codes appear in the right display in manual tests 1, 2, or 3?
- (3) Did the WRN, HLD, DR, or MAL indicators illuminate at any time on the system status display?

- (4) If less than three stations appeared on the right display with the function select in SIG/TST, was the HF radio station WWV referred to for Omega ground station status?
- (5) With the function select in CH/CFS, did #1 and #2 compass agree?
- (6) With mode select in auto, did system automatically advance to next waypoint?
- (7) Did the Omega and doppler agree in ground speed and track angle?
- (8) Did the true airspeed (TAS) agree with aircraft TAS (AWARDS ONLY)?
- (9) Was the CDU self-test performed? Did all the lights illuminate IAW the CDU test chart?

i. CMA-880

- (1) Did the system pass all the self-tests?
- (2) Were there any Mal lights or any alerts generated?
- (3) If the DNC had a BITE fail, could you reset it?
- (4) Did you have any problems inserting way-point data?
- (5) If there was any problem with CARP or GLIDE PATH navigation, was the BARO ALT. Input from the Air Data Computer correct?

j. AN/APN-218

- (1) Did Doppler Self-Test on the ground?
- (2) Did you have a Mal light?
- (3) Was G/S accurate as compared with INS G/S?
- (4) Was drift information correct?

k. LN-15J

- (1) Did system align on time?
- (2) Was Mini Bias performed? What were results?
- (3) If the computer dumped, when?
- (4) If loss of power occurred, did battery function properly?
- (5) If system drifted, did it do so gradually or fly fine for some and then take off?
- (6) If you had a Mal light, what code was it?
- (7) Were fans operating properly; was battery course charge lamp extinguished?
- (8) Was TRUE HDG in tolerance with C-12?
- (9) CIU, AIU, SIU: All switches, knobs, and dials operating properly?
- (10) Did system test OK?
- (11) Did circuit breakers pop?
- (12) Did waypoints work?
- (13) Any noticeable problems with interfacing?

l. AN/ASN-90

- (1) No U-status.
 - (a) Did you get a latitude sync light?
 - (b) Did the light extinguish after 5 seconds?
 - (c) Were IMU and APS built in tests indicators white or on white?

- (2) No A-status.
 - (a) Were the parameters correct?
 - (b) Did parameters 1, 2, and 3 match the form?
 - (c) Were the MAG and true HDG within 2 degrees?
- (3) MAG and TRUE HDG don't match?
 - (a) Did you go to grid slew and manually slew?
 - (b) Did you go to MAG SLAVE to see if they slaved to proper heading?
- (4) Builds up B/S after U-Status.
 - (a) Were TRUE HDG and MAG HDG correct?
 - (b) Were PITCH and ROLL good?

m. AN/APN-153

- (1) Did the system SELF TEST properly?
- (2) If the system broke lock, did it lock on again?
- (3) During memory operation, was the aircraft in straight and level flight?
- (4) Was the aircraft flying over land or water?
- (5) Did the malfunction occur in all altitudes?
- (6) Did the Doppler G/S coincide with the INS G/S?

17. Airlift Defensive Systems (System 76)
(ADS-equipped aircraft)

a. AAR-47 MWS

- (1) System does not operate
 - (a) Was MWS circuit breaker popped?
- (2) Failure light on control box
 - (a) Which numbers illuminated?

b. ALE-40/47

- (1) Does not operate.
 - (a) Were EW SYS and NAV PNL circuit breakers popped?
- (2) Fault/Failure
 - (a) What was the error displayed on the Control display Unit?
- (3) Did not dispense chaff and/or flare.
 - (a) Were safety pins removed from EMI filter or safety switch?
 - (b) What mode was the system in? Auto, Semi, or Manual?
 - (c) Was auto program select switch in proper position?
 - (d) In auto mode, was the MWS on? If so, was missile warning detected by the MWS?
 - (e) In manual mode, was dispense attempted from another aircraft station?
 - (f) How many chaff/flare remaining?

(4) Inadvertent dispense

- (a) What mode was the system in? Auto, Semi, or Manual?
- (b) How many chaff/flare inadvertently dispensed?
- (c) Was there a missile threat indication from the MWS?

c. ALR-69 (if applicable)

(1) "F" displayed on scope.

- (a) When did it occur and for how long?
- (b) Did you recycle power?
- (c) Did you run extended bit (using SEARCH button)?
- (d) If yes, did DF, FSRS, INIT, or MEMORY check bad?

(2) Audio malfunction

- (a) Did you check all audio controls on the ALR-69?
- (b) Did you check all audio controls on interphone control box?
- (c) Was audio present at other stations?

(3) Error symbol displayed

- (a) What was the symbol?
- (b) How long did it remain on?
- (c) Was it on while flying in formation with other aircraft?
- (d) If not, was it on during the entire flight?
If so, was it only on when your radar was operating?

18. Foot and Mouth Decontamination

- (1) Did the aircraft land at a base disinfecting for Foot and Mouth Disease (FMD)? (As of May 2002, Spain and Italy require aircraft to be disinfected if they come from England). If so:**

- (a) Was the aircraft disinfected? If so:

- (b) Was an entry made in the 781, using WUC 02400?
- (c) What was the chemical and concentration used?
- (d) What area(s) were sprayed?
- (e) How long did chemical solution remain on the aircraft?
- (f) How was chemical cleaned off?
- (g) What are the landing gear serial numbers? (If sprayed)

(2) Make the following entries in the 781A:

- (a) Wash and lube due within 72 hours for areas chemically decontaminated for Foot and Mouth Disease.
- (b) If landing gear were sprayed/disinfected, make the following entry, “visually identify the landing gear serial numbers and verify this information is accurately reflected in G081.

(3) Report the following information electronically to HQ AMC/LGMJS@scott.af.mil.

- (a) MDS and complete tail number.
- (b) Information from 18(1), (a)-(g).

NOTE:

All weapon malfunctions require detailed explanation to properly analyze each malfunction. Any corrective action taken by the flight crew will be fully explained.